



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/105,572	06/26/1998	DOUGLAS W. HALL	CORN-0002	5745

7590 04/07/2006  
MOSER, PATTERSON & SHERIDAN, L.L.P.  
3040 POST OAK BOULEVARD, SUITE 1500  
HOUSTON, TX 77056

EXAMINER

RUDE, TIMOTHY L

ART UNIT PAPER NUMBER

2883

DATE MAILED: 04/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/105,572

Applicant(s)

HALL ET AL.

Examiner

Timothy L. Rude

Art Unit

2883

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 October 2005.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 35-43 is/are pending in the application.  
4a) Of the above claim(s) 35,37,38 and 42 is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 36,39-41 and 43 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claims:***

Claims 35-43 are pending in the application. Claims 35-37, 39, and 41-43 are amended.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

***Election/Restrictions***

Newly amended claims 35, 37, 38, and 42 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons:

Originally presented claims were drawn to the species of filtering means for preventing excitation by pump light that comprises a dopant for absorption of pump light.

Newly amended claims 35, 37, 38, and 42 are drawn to an alternate species wherein the filtering means for preventing excitation by pump light that comprises a fiber-type grating for reflecting pump light.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 35, 37, 38, and 42 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

***Estoppel***

Claims 36 and 39-40 are rejected as unpatentable over the lost count 2 on the grounds of estoppel.

The lost Count 2:

A fiber amplifier comprising

a gain optical fiber having a single-mode core containing dopant ions capable of producing stimulated emission of light within a predetermined band of wavelengths including a wavelength  $\lambda_s$  when pumped with light of wavelength  $\lambda_p$ , said gain fiber having input and output ends, said dopant ions being selected from the group consisting of erbium, neodymium and praseodymium,

filtering means for attenuating light at least some of the wavelengths within said predetermined band of wavelengths, said filtering means containing a dopant selected from the group consisting of erbium, dysprosium, neodymium, ytterbium, samarium, praseodymium, thulium, vanadium and cadmium selenide,

means for introducing a signal of wavelength  $\lambda_s$  into said gain fiber input end, and

means introducing pump light of wavelength  $\lambda_p$  into said gain fiber.

Prior claims 15-20 correspond to the lost count 2.

The only differences between claims 36, 39, and 40 and the count 2 are 1) that the gain fiber is limited to a fiber "having only one single-mode core" in contrast to the

Art Unit: 2883

count 2 which includes a gain fiber "having a single-mode core", and 2) the lost count 2 certainly anticipates gain fiber having **only one** single-mode core as claimed in claims 36 and 39 of this reissue application, since the lost count 2 refers to a gain optical fiber having a single mode core. The only difference between amended claims 36 and 39 and the count 2 is the further limitations as to first and second pump light-attenuating fiber sections. Grasso teaches in the background that the use of such was known in the art to attenuate noise (col. 2, lines 43-53). Certainly the ordinary artisan would know to use such a pump light-attenuating fiber(s) [Applicant's first and second pump light-attenuating fiber sections utilizing a dopant that substantially attenuates pump light] to attenuate noise. Also, mere duplication of parts is not patentably distinct [MPEP 2144.04].

Claims 41 and 43 are rejected as unpatentable over the lost counts on the grounds of estoppel.

Claim 41 also corresponds to the lost Count 1 of the interference proceeding detailed above. The difference between the interference count 1 and these claims is that these claims further define the gain spectrums of the gain fiber and ion filtering means over the wavelength bands. It is certainly inherent that there is some attenuation (nothing known to man has zero loss) and it is certainly inherent that the gain spectrum will have a relatively flat response over a predetermined band of wavelengths in count 2, since there are no constraints on said predetermined band of wavelengths, e.g.,

Art Unit: 2883

response will be reasonably flat [Applicant's relatively small gain variation] at least for a very [extremely] narrow band of wavelengths at or near  $\lambda_p$  and/or  $\lambda_s$ .

The only difference between amended claim 41 and the count 1 is the further limitations as to first and second pump light-attenuating fiber sections. Grasso teaches in the background that the use of such was known in the art to attenuate noise (col. 2, lines 43-53). Certainly the ordinary artisan would know to use such a pump light-attenuating fiber(s) [Applicant's first and second pump light-attenuating fiber sections utilizing a dopant that substantially attenuates pump light] to attenuate noise. Also, mere duplication of parts is not patentably distinct [MPEP 2144.04].

Claim 43 corresponds to the lost Count 2 of the interference proceeding detailed above.

The difference between the interference count 2 and claim 43 is that this claim further defines the gain spectrums of the gain fiber and filtering means over the wavelength bands. It is certainly inherent that the gain spectrum will have a relatively flat and a not flat response over a predetermined band of wavelengths in count 2, since there are no constraints on said predetermined band of wavelengths, e.g., response will be flat (zero) for wavelengths very far from  $\lambda_p$  and  $\lambda_s$ , and will have some "not flat" rise to some non zero response at or near  $\lambda_p$  and/or  $\lambda_s$ .

The only difference between amended claim 43 and the count 2 is the further limitations as to first and second pump light-attenuating fiber sections. Grasso teaches in the background that the use of such was known in the art to attenuate noise (col. 2,

Art Unit: 2883

lines 43-53). Certainly the ordinary artisan would know to use such a pump light-attenuating fiber(s) [Applicant's first and second pump light-attenuating fiber sections utilizing a dopant that substantially attenuates pump light] to attenuate noise. Also, mere duplication of parts is not patentably distinct [MPEP 2144.04].

### ***Response to Arguments***

Applicant's arguments filed 14 October 2005 have been fully considered but they are not persuasive.

#### **Applicant's ONLY arguments are as follows:**

Prior art does not teach newly added limitations as to additional pump light excitation prevention means.

#### **Examiner's responses to Applicant's ONLY arguments are as follows:**

It is respectfully pointed out that Grasso teaches in the background that the use of such was known in the art to attenuate noise (col. 2, lines 43-53). Certainly the ordinary artisan would know to use such a pump light-attenuating fiber(s) [Applicant's first and second pump light-attenuating fiber sections utilizing a dopant that substantially attenuates pump light] to attenuate noise. Also, mere duplication of parts is not patentably distinct [MPEP 2144.04].



**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy L. Rude whose telephone number is (571) 272-2301. The examiner can normally be reached on Mon-Thurs.

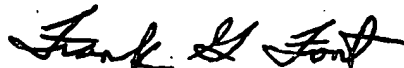
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on (571) 272-2415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



tlr

Timothy L Rude  
Examiner  
Art Unit 2883



Frank G. Font  
Supervisory Patent Examiner  
Technology Center 2800